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County Borough



of Blackpool.

Annual Report

FOR THE YEAR 1920,

BY

E. W. REES JONES, M.D., D.P.H.

*Medical Officer of Health and Medical Superintendent
to the Infectious Diseases Hospital.*

PRESTON:

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HEALTH COMMITTEE, 1920.

Mr. Councillor	E. HOWE, J.P., (Mayor).
„ Alderman	HAMPSON, J.P., Chairman.
„ Councillor	HARDMAN, Vice-Chairman.
„ Alderman	BROWN, J.P.
„ „	J. R. GATH, J.P.
„ „	HILL, J.P.
„ Councillor	BEAN, J.P.
„ „	BEAUMONT.
„ „	BELLARBY,
„ „	DAWSON.
„ „	DIXON.
„ „	G. W. GATH.
„ „	GORTON.
„ „	MASHETER, J.P.
„ „	MITCHELL, J.P.
„ „	TOMLINSON.
„ „	WHITTAKER.

MEETINGS :—Usually the Third Wednesday of the Month.

HEALTH GENERAL SUB COMMITTEE.

Mr. Councillor	E. HOWE, J.P., (Mayor).
„ Alderman	HAMPSON, J.P., Chairman.
„ Councillor	HARDMAN, Vice-Chairman.
Mr. Alderman	BROWN, J.P.
„ „	HILL, J.P.
„ Councillor	BEAUMONT.
„ „	GORTON.
„ „	MASHETER, J.P.

PUBLIC HEALTH OFFICE,
BLACKPOOL.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I beg to submit to you my Annual Report for the year 1920.

With regard to the Vital Statistics, the various rates are based upon a population of 70,545, as estimated by the Registrar General. The Birth Rate of Blackpool has always been low, but it is shewing an upward tendency, and for the year under review it was 16.71 per 1,000, which is the highest since the year 1910. The death Rate was 13.6 per 1,000, which was the lowest since 1912. The Infant Mortality was at the rate of 70 per 1,000 births, which is the lowest we have ever yet reached. I hope that the measures taken to preserve infant life will have a still greater influence upon this rate and that in a few years I shall be able to report to you a figure of 50.

With regard to Infectious Diseases, it will be noted that the incidence of Enteric Fever, viz., one case, was the lowest ever recorded in the town.

Dr. Bartlett has prepared a short report upon the subject of Venereal Diseases and it will be noted that the clinic is increasing and that our accommodation is insufficient. Our proposals for increased accommodation are now before the Ministry of Health.

The Maternity Home in Whitegate Drive was opened in February, 1920, and has proved successful and acceptable. Increased accommodation is necessary and I trust you will soon see your way to provide room for more patients.

A vast amount of general sanitary work has been done in the department, especially in regard to housing conditions, and Inspector Sanderson gives a tabulated list of visits, etc., paid by him and the District Inspectors.

In dealing with the various aspects of Public Health administration I have received efficient and loyal co-operation from the matron and nurses at the Sanatorium and Maternity Home, the out-door nursing staff, and the inspectorial and clerical staffs. Inspector Newby has rendered great assistance in the Bacteriological Department in addition to carrying out his own work, and Mr. Smith, the chief clerk, has also assisted me greatly in the preparation of this Report.

I beg to remain, Gentlemen,

Your obedient servant,

E. W. REES JONES.

May, 1921.

STATISTICAL SUMMARY, 1920.

Situation : Latitude, 53° 49' N. ; Longitude, 3° 3' W.

Area of Borough (exclusive of foreshore)	5,273	acres
Area of foreshore.....	1,121	„
Population (Census, 1st April, 1911)	58,371	persons
Persons per House as per Census	4.439	
	1919.	1920.
Rateable value (General District Rate)	£635,328	£690,689
Do. (Borough Rate)	£650,062	£675,946
Number of dwelling-houses on rate book	16,848	17,488
Do. do. do. empty	144	403
Population of residents estimated by the Registrar General—		
For Birth Rate	70,671	} 70,545
For Death Rate.....	67,842	
Density of Population (persons per acre)	12.86	13.38
Number of births	837	1,179
Birth Rate (per 1,000 inhabitants)	11.84	16.71
Number of deaths of residents	1,049	960
Death Rate (per 1,000 inhabitants).....	15.46	13.60
Death Rate (corrected for age and sex distribution ; factor for 1911 Census 1.0019)	15.49	13.63
Number of deaths of children under one year of age	81	82
Infantile mortality	96.8	69.6

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

Population. The population of the district as estimated by the Registrar General is 70,545, as compared with a population at the last census in 1911 of 58,371. The density of the population in the town generally is 13.37 persons per acre. The density for each separate ward is as follows :—Bispham 2.16, Warbreck 9.63, Claremont 41.22, Talbot 33.85, Bank Hey 40.61, Brunswick 31.99, Foxhall 45.38, Tyldesley 20.92, Alexandra 28.41, Victoria 10.83, Waterloo 6.76, Layton 10.95, and Marton 14.37.

The Total Area of the town is 5,273 acres, while the area of each of the wards is Bispham 1,660, Warbreck 370, Claremont 157, Talbot 191, Bank Hey 126, Brunswick 181, Foxhall 180, Tyldesley 248, Alexandra 196, Victoria 377, Waterloo 547, Layton 632, and Marton 408 acres.

Physical Features. The mean elevation of the Borough is about 28½ feet above sea level, and varies between about 97 feet at Warbreck Hill and about 9½ feet in the field north of Bloomfield Road, west. The main direction of the natural drainage is away from the sea. Geologically the town may be roughly divided into two portions, the first being that north of the Central Station and having a subsoil of glacial boulder clays, and the second lying south of the Central Station, consisting of peat lying on the glacial drift and overlain with a greater or less thickness of blown sand.

Social Conditions. The chief occupation of the inhabitants is that of catering generally for visitors, together with such industries as are essential to continuance of the local community. There is a strong tendency for the establishment of industries which employ female labour, such as the manufacture of waterproof coating, and there is no doubt that in the near future a large amount of female labour will be absorbed in these and similar factories. Apart from the fact that during a portion of the year the work of the inhabitants generally is of a very strenuous nature, the industries of the town are healthy, differing greatly from industrial centres where pollution of the atmosphere is inevitable, and where conditions of employment have a deterrent effect upon the health of the workers.

VITAL STATISTICS.

(a) **Births.**—During the year 1,179 births were registered, including 7 in the Kirkham Workhouse. These, divided into sexes for the four quarters of the year are as follows :—

	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Total.
Males.....	149	155	142	136	582
Females ...	166	161	124	146	597
Total	315	316	266	282	1179

The birth rate for the year on the gross population was 16.71 per 1,000. It will be observed from the chart facing this page, and also from the table on page 7, that the birth rate from the year 1878 has shewn a steady and continuous decline, until the year 1918, when it reached the very low figure of 10.63 per 1,000 of the population. The sociological aspects of this low birth rate have been commented upon in my previous reports. It is satisfactory to record that the years 1919, and 1920 have shewn an upward tendency of the birth rate, and the figure for the latter year, viz., 16.71, is the highest recorded since 1910.

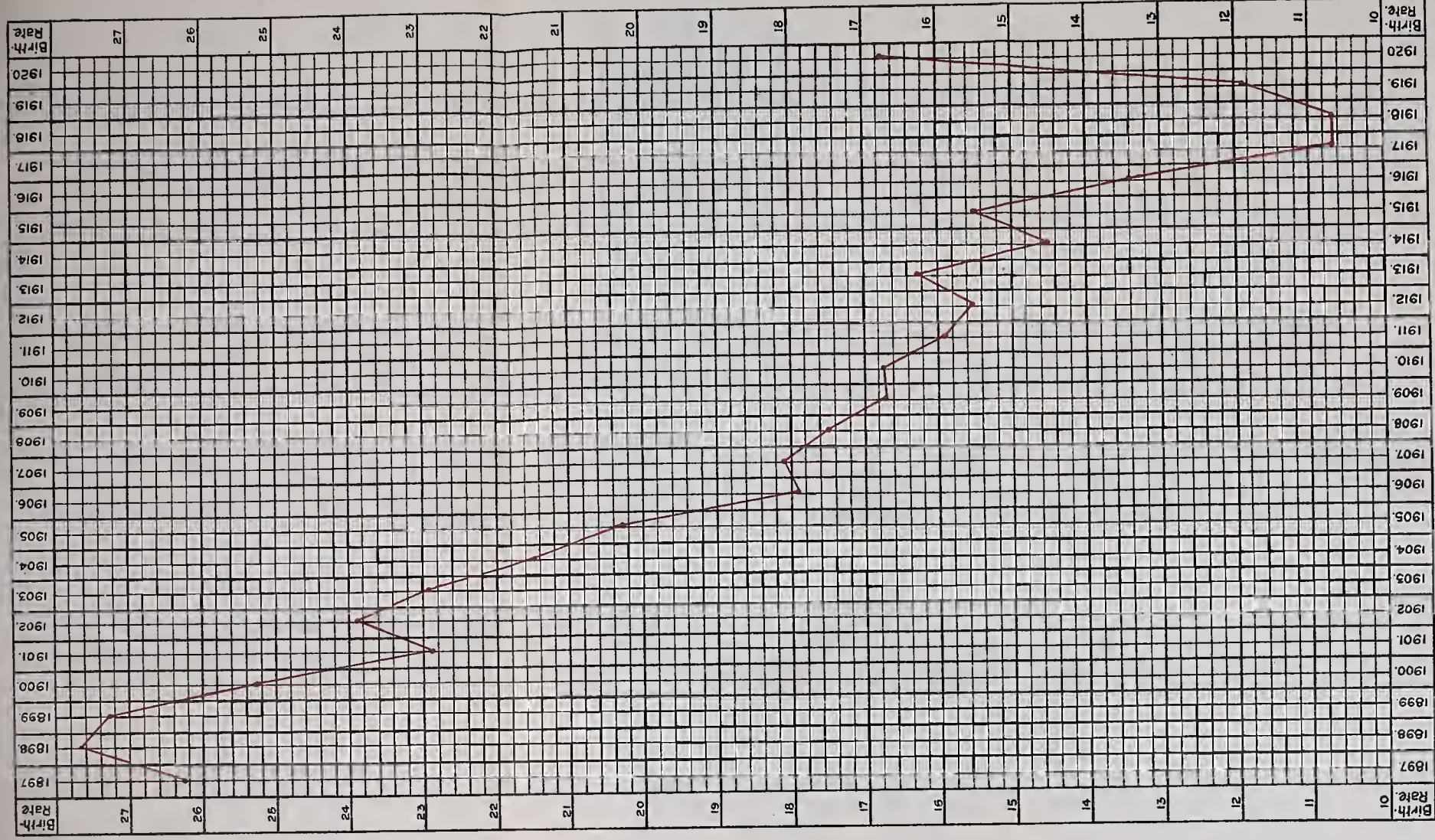
The comparison of the 1920 figure for other portions of the country is as follows :—

England and Wales	...	...	...	25.4 per 1,000
96 Great Towns	...	...	...	26.2 „
148 Smaller Towns	...	...	...	24.9 „
London	...	...	...	26.5 „
Blackpool	...	...	...	16.71 „

In comparing Blackpool with other portions of the country and noting its relatively low position in the table, it is necessary to bear in mind the lower proportion of potential child-bearing women (i.e., married women below the age of 45 years) to the remainder of the population which pertains in our local community, when contrasted with this proportion in other districts and the country generally. If the birth rate were computed upon the actual number of potential child-bearing women the relative position of Blackpool would not be so unfavourable.

The earliest recorded birth rate which I have of Blackpool is for the year 1878, when with a population of 13,000, there was a rate of 38.8. I have prepared a table based on the same lines as a table in the Annual

BIRTH-RATES FOR THE YEARS 1897-1920.



Report of the Registrar General for the year 1907. The rate for 1878 is taken as a standard and is called 100, and the subsequent years are given as percentages compared with this year, 1878 :—

Period.	Birth Rate Blackpool.	Birth rate Blackpool compared with rate for 1878, taken as 100.	Birth rate England and Wales.	Birth rate England & Wales compared with rate for 1878, taken as 100.
1878	38.8	100	35.6	100
1879	36.6	94.3	34.7	97.5
1880	34.0	87.6	34.2	96.1
1881	30.6	78.9	33.9	95.2
1882	30.0	77.3	33.8	94.9
1883	30.0	77.3	33.5	94.1
1884	29.8	76.8	33.6	94.3
1885	27.4	70.6	32.9	92.4
1886	25.9	66.8	32.8	92.1
1887	25.3	65.2	31.9	89.6
1888	24.5	63.1	31.2	87.6
1889	26.5	68.3	31.1	87.4
1890	23.7	61.1	30.2	84.8
1891	22.3	57.5	31.4	88.2
1892	24.0	61.9	30.4	85.4
1893	22.4	57.7	30.7	86.2
1894	23.9	61.6	29.6	83.1
1895	26.7	68.8	30.3	85.1
1896	25.7	66.2	29.6	83.1
1897	26.25	67.7	29.6	83.1
1898	27.74	71.5	29.3	82.3
1899	27.34	70.5	29.1	81.7
1900	25.27	65.1	28.7	80.6
1901	22.90	59.0	28.5	80.1
1902	23.96	61.8	28.5	80.1
1903	22.97	59.2	28.4	79.8
1904	21.53	55.5	27.9	78.4
1905	20.30	52.3	27.2	76.6
1906	17.91	46.2	27.1	76.1
1907	18.09	46.6	26.3	73.9
1908	17.54	45.2	26.2	73.6
1909	16.70	43.0	25.6	71.9
1910	16.74	43.1	24.8	69.7
1911	15.97	41.2	24.4	68.5
1912	15.50	39.9	23.8	66.9
1913	16.25	41.9	23.9	67.1
1914	14.47	37.3	23.8	66.9
1915	15.54	40.0	21.8	61.2
1916	13.40	34.5	21.6	60.7
1917	10.64	27.4	17.8	50.0
1918	10.63	27.4	17.7	49.7
1919	11.84	30.5	18.5	52.0
1920	16.71	43.1	25.4	71.3

There were 98 illegitimate children born during the year, including 7 at Kirkham Workhouse. This figure gives the following rates :—

- (1) 1.39 per 1,000 of the inhabitants.
- (2) 5.82 per 1,000 females of conceptive age.*
- (3) 8.31 per cent. of the total births.

* *Calculated on there being 16,832 females at child-bearing age—20 to 45.*

These figures for the past few years have been as follows :—

	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906
(1)	1.39	1.78	1.18	1.23	1.18	1.18	1.03	1.31	1.45	1.29	1.13	1.35	1.14	1.08	1.14
(2)	5.82	7.47	4.98	5.14	4.95	4.96	4.17	5.48	6.07	5.27	4.61	5.50	4.64	4.39	4.64
(3)	8.31	14.98	11.18	11.52	8.81	7.62	6.87	8.05	9.35	8.10	6.76	8.09	6.49	5.96	6.35

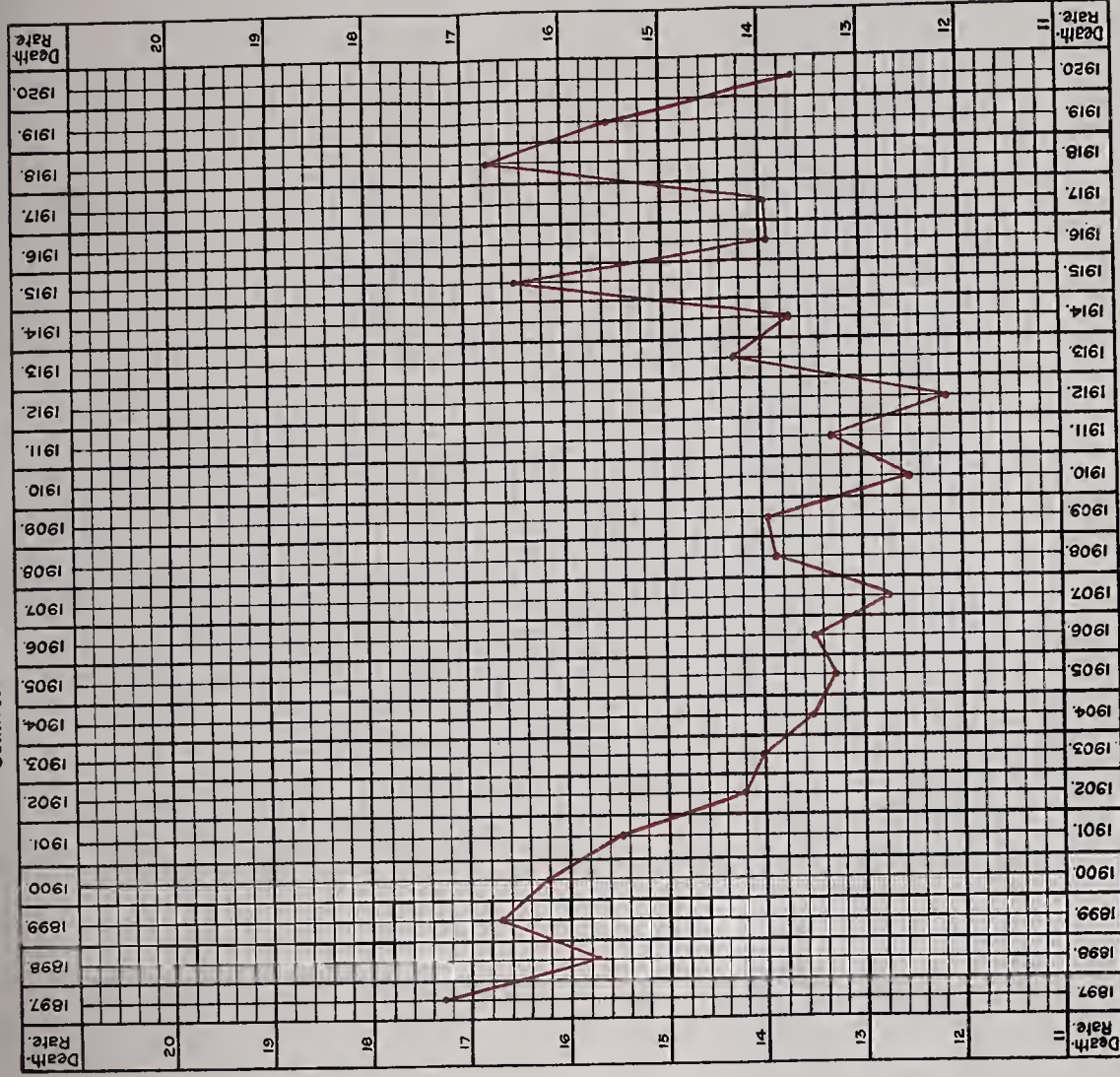
The second figure, i.e., the proportion of illegitimate births to women at conceptive ages, is the one which represents best the progress of illegitimacy in the country. It is not necessary to amplify the figures, as it will be obvious that the 1920 rates are not favourable, though there is considerable improvement as compared with some of the previous years. I do not see, however, that any administrative action can have an influence over them.

(b) **Deaths.** The number of deaths of Blackpool residents which occurred during the year was 960. This figure includes the deaths of 43 persons in the Kirkham Workhouse, and of 44 persons in areas outside Blackpool.

The deaths, divided into sexes for the four quarters of the year, were as follows :—

	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Total.
Males.....	138	103	100	125	466
Females ...	137	123	116	118	494
Total ...	275	226	216	243	960

DEATH RATES 1897-1920. CORRECTED FOR AGE AND SEX DISTRIBUTION.



The death rate for the year was 13.60 per 1,000 of the population. The comparison of this rate with other portions of the country is as follows :—

England and Wales	...	...	...	12.4 per 1,000
96 Great Towns	...	...	...	12.5 „
148 Smaller Towns	...	...	...	11.3 „
London	...	...	...	12.4 „
Blackpool	...	...	...	13.60 „

The progress of the death rate year by year will be seen on reference to the chart facing this page, and it will be satisfactory to note that the 1920 figure is the lowest recorded since the year 1912.

The number of deaths at various age periods and the percentage of the total deaths are as follows :—

Age period.	Number of Deaths.	Percentage of total deaths.
Under 12 months.....	82	8.5
1 and under 5 years	25	2.6
5 and under 65 years ...	470	48.9
65 years and over	383	39.9

Of the 960 resident deaths in 1920 the causes of 879, or 91.6 per cent., were certified by medical practitioners. Inquests were held respecting 40, or 4.2 per cent., whilst the remaining 41, or 4.3 per cent., were uncertified.

The Ward statistics with regard to deaths and death rates are as follows (the rates for the previous year being included for the sake of comparison) :—

Wards.	Estimated Population	Number of Deaths (Residents).	Death Rate 1920	Death Rate 1919
Bispham	3544	40	11.29	10.56
Warbreck	3566	50	14.02	12.54
Claremont ...	6571	65	9.88	13.13
Talbot.....	6466	113	17.48	19.78
Bank Hey	5117	65	12.70	17.48
Brunswick....	5790	98	16.93	17.96
Foxhall	8168	83	10.16	17.44
Tyldesley.....	5188	67	12.91	14.23
Alexandra	5568	70	12.57	14.38
Victoria	4083	55	13.47	14.26
Waterloo	3698	52	14.06	16.57
Layton.....	6922	78	11.27	14.42
Marton.....	5864	124	21.15	14.54

Causes of Death.—According to the groups of diseases the following deaths occurred :—

		No. of Deaths.	Percentage of Total Deaths.
I.	General Diseases	263	27.4
II. ..	Diseases of the Nervous System and of the Organs of Special Sense.....	109	11.4
III. .	Diseases of the Circulatory System...	159	16.6
IV. .	Diseases of the Respiratory System...	158	16.5
V. ...	Diseases of the Digestive System	58	6.0
VI. .	Non-Venereal Diseases of the Genito- Urinary System and Annexa.....	55	5.7
VII.	The Puerperal State	12	1.2
VIII.	Diseases of the Skin and the Cellular Tissue	5	0.5
IX...	Diseases of the Bones and of the Or- gans of Locomotion	1	0.1
X. ..	Malformations	10	1.0
XI...	Diseases of early Infancy.....	30	3.1
XII.	Old Age	63	6.6
XIII.	Affections produced by external causes.....	24	2.5
XIV.	Ill-defined causes.....	13	1.4

Cancer continues to make its large and increasing toll upon the population, and in 1920 112 deaths were attributable to this disease. This is the largest number recorded in any one year. I here reproduce a table which appeared in my 1907 report, with the figures for the subsequent years added :—

YEAR.	Number of Deaths.	Death Rate.	England and Wales.
1895	16	0.486	0.753
1896	17	0.464	0.762
1897	30	0.746	0.785
1898	22	0.484	0.799
1899	34	0.705	0.826
1900	47	0.937	0.820
1901	54	1.064	0.842
1902	47	0.901	0.844
1903	52	0.981	0.872
1904	41	0.755	0.877
1905	54	0.969	0.885
1906	54	0.946	0.917
1907	52	0.890	0.909
1908	51	0.854	0.923
1909	59	0.960	0.952
1910	46	0.765	0.967
1911	72	1.179	0.993
1912	69	1.111	1.019
1913	92	1.433	1.064
1914	94	1.416	1.069
1915	85	1.323	1.121
1916	93	1.475	1.166
1917	103	1.655	1.210
1918	102	1.580	1.218
1919	108	1.591	1.145
1920	112	1.588	—

Cancer is a disease with regard to which administrative action is urgently called for. As we are not aware of the exact cause of the disease, prevention is as yet impossible, but much can be done to urge upon all the importance of surgical treatment at the earliest possible stage, even when only "suspected." By making it known that the only hope of cure is in early surgical treatment, and by ensuring that facilities for such treatment are easily obtainable by all persons irrespective of social

position, we can confidently hope to arrest the upward tendency of the cancer death rate. I do not propose to give the ages at death, or the parts of the body affected in the Blackpool cancer deaths, as they comprise only a small population, and therefore are not of much value. These statistics are given for the country generally in the various reports of the Registrar General.

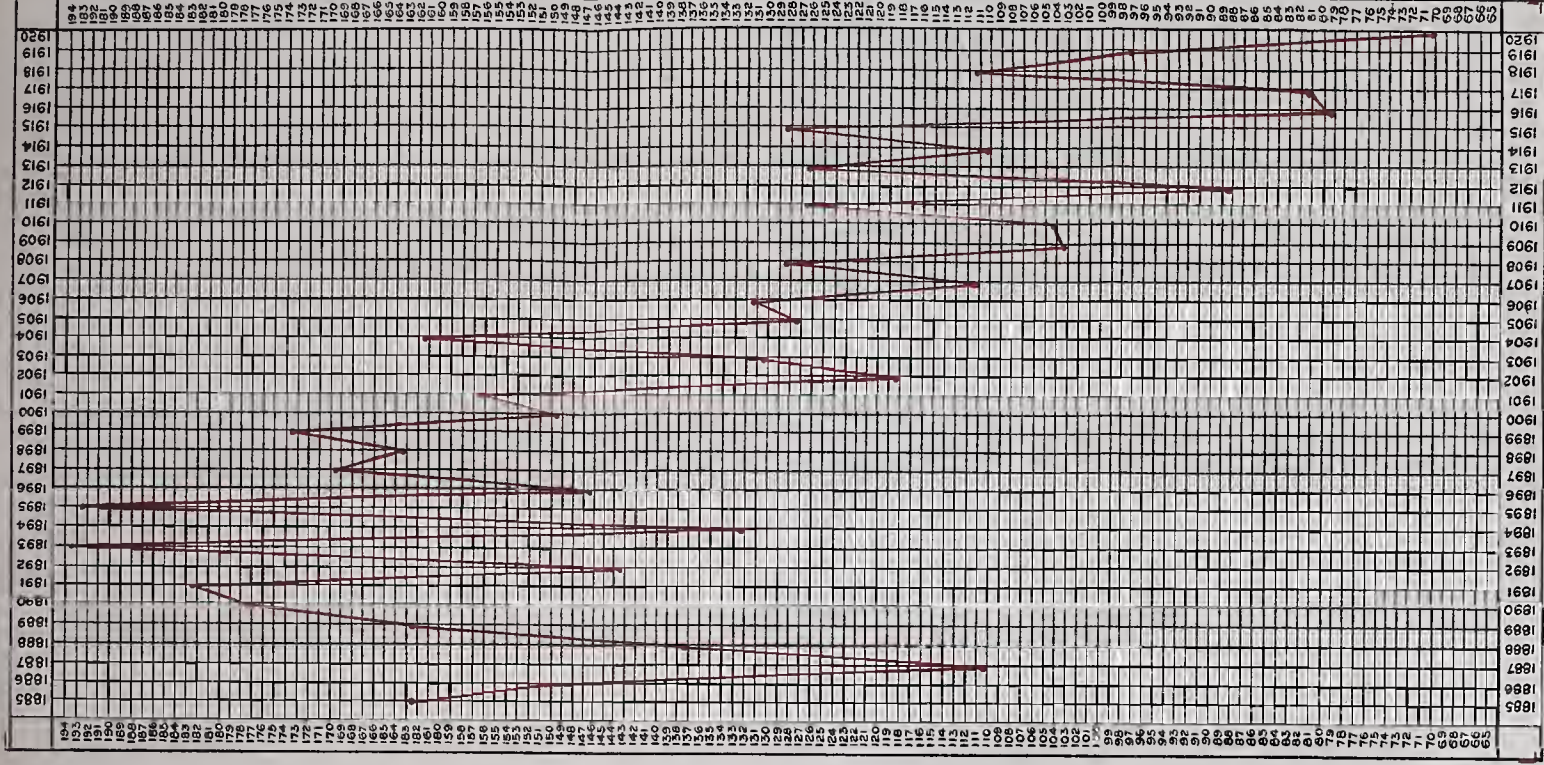
Offers of disinfection have been made in all cases, but in 23 only was disinfection by the Health Authority accepted. In the other cases it was done by the occupiers.

Other conditions which contributed to the total number of deaths were as follows :—Influenza 10, Pulmonary Tuberculosis 61, Diabetes 14, Anæmia 14, Apoplexy 64, Diseases of the Heart 107, Bronchitis 80, Pneumonia 70, Bright's Disease 38, Premature Birth 14, Infantile Debility 13, Old Age 63.

Infantile Deaths.—Eighty-two children under the age of 12 months died during 1920, and the Infantile Mortality was at the rate of 69.6 per 1,000 births.

The following table gives the infant death rate per 1,000 births, for the past 42 years, and the Chart represents in a more diagrammatic manner the fluctuations from year to year—

CHART SHOWING INFANTILE MORTALITY from 1885 to 1920.



INFANTILE MORTALITY 1879—1920.
RATE PER 1,000 BIRTHS.

Year.	Blackpool	England and Wales.
	Residents only.	
1879	122	135
1880	206	153
1881	126	130
1882	221	141
1883	123	137
1884	140	147
1885	162	138
1886	150	149
1887	110	145
1888	137	136
1889	162	144
1890	177	151
1891	182	149
1892	143	148
1893	193	159
1894	132	137
1895	192	161
1896	146	148
1897	169	156
1898	163	160
1899	173	163
1900	149	154
1901	156	151
1902	118	133
1903	130	132
1904	161	145
1905	127	128
1906	131	133
1907	111	118
1908	128	121
1909	103	109
1910	104	106
1911	126	130
1912	88	95
1913	126	109
1914	110	105
1915	128	110
1916	79	86
1917	81	81
1918	111	97
1919	97	89
Mean of 41 years	139	132
1920	70	80

It will be observed with much satisfaction that the Infant Mortality Rate for 1920 is the lowest ever yet recorded in the history of the town. I attribute this result in no small measure to the active and increasing administrative attempts on the part of the Corporation to deal with the preservation of infant life. We must not, however, come to the conclusion that all is yet done in this direction, and we must aim at a rate not exceeding 50.

Not only is the Blackpool infant mortality rate the lowest we have yet reached, but for the year 1920 it is lower than that of England and Wales as a whole, of the groups of large towns, of the group of small towns, and also of London. These figures are as follows :—

England and Wales	...	...	...	...	...	80
96 Great Towns	...	...	...	...	...	85
148 Smaller Towns	...	...	...	...	...	80
London ...	...	...	...	...	...	75
Blackpool	...	...	...	...	...	70

The rates for the four quarters of the year were as follows :—

1st quarter	...	...	...	...	...	102
2nd „	...	...	...	...	...	63
3rd „	...	...	...	...	...	41
4th „	...	...	...	...	...	67

The months in which the infantile deaths occurred were :—

January	6	May	8	September	5
February	9	June	4	October	10
March	17	July	4	November	4
April	8	August	2	December	5

Fifty-seven of the cases, or 70 per cent. of the total, died before reaching the age of three months. It is therefore evident that our attention must be specially directed to babies under this age and even prior to birth. In cases of repeated still-births the attention of the medical practitioners has been called to the desirability of having the mothers tested for the Wassermann reaction.

DEATHS UNDER ONE.—TOTAL.

15

CAUSES.	YEAR		QUARTERS								FEEDING			Mother employed away from home	No Information	Illegitimate.
	Under 3 mths	Total	First	Second		Third		Fourth		Not Breast Fed	Breast Fed partly or entirely	Hand Fed				
				Under 3 mths	Total	Under 3 mths	Total	Under 3 mths	Total							
1—Common Infectious Diseases (Measles, Diphtheria and Whooping Cough), ...	1	2	—	—	—	—	1	2	—	—	—	2	—	—	—	
2—Diarrhoeal Diseases :— Diarrhoea, Enteritis, and Gastritis.	4	5	2	2	1	2	1	1	—	—	—	3	1	—	—	
3—Congenital Malformations... ..	8	12	—	4	4	4	2	2	2	2	1	4	5	3	3	
4—Premature Birth, Debility, Icterus, etc.	23	25	12	14	2	2	—	—	9	9	6	10	5	4	4	
5—Tubercular Diseases	—	3	—	1	—	1	—	—	—	1	—	1	2	—	1	
6—Other Causes { Convulsions Bronchitis Pneumonia Other causes	3	4	1	1	—	—	2	3	—	—	3	—	1	—	—	
	2	8	1	5	1	1	—	—	—	2	—	4	4	1	1	
	7	10	3	2	2	5	2	2	—	1	—	3	7	3	2	
	9	13	2	3	3	5	1	1	3	4	2	4	4	2	2	
Totals	57	82	21	32	13	20	9	11	14	19	12	29	31	12	13	

Deaths from Violence.—The number of deaths classified under this heading was 25 for the year 1920, as compared with 28 in 1919, 21 in 1918, 26 in 1917, and 22 in 1916. They are classified thus :—

	Suicide.	Accidents or affections produced by external causes.	Total.
Burns	—	1	1
Drowning	5	—	5
Homicide	—	3	3
Other Violence	—	1	1
By Crushing	1	2	3
Cutting or Piercing Instruments ...	3	1	4
Injury by Fall	—	4	4
Mines and Quarries	—	1	1
Hanging	2	—	2
Absorption of deleterious gases ...	—	1	1
	11	14	25

Poor Law Relief.—I am obliged to the relieving officers for the following information :—

A SUMMARY OF PERSONS WHO HAVE RECEIVED OUT-RELIEF
IN BLACKPOOL DURING THE YEAR 1920.

Males : 27 temporarily disabled and 46 not able-bodied	73
Females : 102 in health (widows, etc.) with children and 67 not able-bodied	169
Children under 16 years of age	250
Total	492

Use of Voluntary Hospitals, &c.

VICTORIA HOSPITAL, 1920.			
	Medical	Surgical	Total.
In patients ...	152	1145	1,297
Out	813	26532	27,345
Totals ...	965	27677	28,642

FOXTON DISPENSARY, 1920.					
	Surgical.		Medical.		Total
	Males.	Females.	Males.	Females.	
Out patients...	21	44	137	283	485

District Nurses.—Two district nurses are employed by the Health Department of the Corporation and their whole time is occupied in district nursing amongst the sick poor of the town. As far as possible they act under the instructions of the medical practitioners in attendance upon the cases, but in many instances, such as those of chronic bed-ridden cases, doctors are not in attendance, under which circumstances the nurses have to receive their instructions from me or to act according to their own judgment. Their services have been much utilised, and in carrying out their valuable work the large total of 4,944 visits were paid by them.

Ladies' Sick Poor Association.—About 900 cases were visited and relieved by the ladies of this Association during the year. Some of the cases were assisted for a few months, others are kept for years, some even as long as 14 and 15 years. The help takes the form of meat, eggs, groceries, clothes, boots, loan of bath chairs, etc., £503 being expended for this purpose during the year.

II.—SANITARY CIRCUMSTANCES OF THE BOROUGH.

Water Supply.—This is under the jurisdiction of the Fylde Water Board, a body composed of representatives from Blackpool, Lytham, St. Annes, and Fleetwood. The water is an upland surface water, of a soft and peaty nature, and is now laid on to every inhabited part of the Borough. The gathering ground is a good one and is thoroughly safeguarded from all risk of animal pollution.

Sewerage.—With the exception of certain outlying portions the whole of the town is sewered. The main portion of the sewage flows by gravitation to the central sewage chamber from which iron and steel outfall pipes, each 3 feet in diameter, carry the sewage out to sea for a distance of 950 yards. The sewage is screened, and is discharged immediately the level of the sea is below the level of the sewage in the storage chambers until $1\frac{1}{2}$ hours before the time of low water. Valves fixed in a pen-stock chamber serve to keep all sea water from the sewage chambers and sewers while the outfall is tide-locked. Storm overflow pipes are provided to relieve the sewage chambers during heavy rains with an in-coming tide, and also a pumping chamber for use if required when the sewerage system is full at high tide.

From two portions of the town it is necessary to pump the sewage into the sewage chamber, and a smaller and separate sewage system is in existence at the northern portion, which flows by gravitation to an outfall which carries the sewage seawards to an extent of 600 yards. The outlet is below the level of the water at all states of the tide, and the discharge is continuous.

Closet Accommodation.—With the exception of the outlying portions of the district which are not sewered, the whole of the town is on the sewerage system. It is proposed, in connection with certain road alterations, to extend the sewers, and this will enable the closets to the houses near to Bispham station to be converted into the water carriage system. At present the sewage from these houses empties into cesspools, and these in their turn are emptied and the contents poured down adjacent manholes into the sewers.

There are 26,736 water closets in the town, about 60 cesspools, and about 20 privies.

Scavenging.—This is carried out by the Cleansing Department of the Corporation. As all the inhabited portions of the town are on the water carriage system the collection and disposal of excreta other than by this system is small in quantity. The cesspools and privies, where they exist, are emptied and cleaned at least once a week.

With regard to household refuse, galvanised iron bins with tight-fitting covers are the most satisfactory of all forms of receptacles and these are the forms which are being encouraged by my department. I am informed by the Cleansing Superintendent that during the season a daily collection was carried out at the Hotels, Hydros, Restaurants, and the larger Boarding-houses, whilst from the ordinary Company-houses the refuse is removed from two to three times a week. With a slight modification requisite for meeting the reduced demand in connection with Company-houses, this system is maintained during the winter months. The refuse collected is dealt with at the Destructor, and during the year 26,722 tons were destroyed.

With regard to the **inspection of ash-receptacles** by my department, the following work has been carried out :—

TOTAL NUMBER OF VISITS MADE	...	...	...	...	3,790
Satisfactory ash receptacles	...	...	...	...	1,387
Unsatisfactory ash receptacles	...	...	...	...	632
Re-inspections of houses under notice	...	...	...	...	1,771

TOTAL NUMBER OF NOTICES SERVED—	Preliminary.	Statutory.
(A) To abolish modified ashpits...	3	—
(B) To repair modified ashpits ...	17	2
(c) To provide galvanised ashbins	687	233
Total number of modified ashpits repaired	...	21
„ ashpits abolished	...	—
„ galvanised ashbins provided	...	759
„ informations laid	...	438
„ modified ash receptacles abolished	...	—

Sanitary Inspection of the District.—This is under the supervision of the Chief Sanitary Inspector, who has submitted to me the following statistical statement of the work carried out by him and his assistants :—

COMPLAINTS RECEIVED	...	...	...	...	...	...	629
VISITS AND INSPECTIONS (TOTAL)	...	...	...	...	...	...	14,033
Number of houses fully inspected	...	...	...	...	...	...	344
Number of inspections of works in progress	...	...	...	...	...	...	2,093
Visits to houses and other premises	...	...	...	...	...	...	2,359
Re-inspections in relation to nuisances under notice	...	...	...	...	...	...	1,532
Inspections of basements	...	...	...	...	...	...	379
Inspections of manure heaps	...	...	...	...	...	...	939
Sands inspections	...	...	...	...	...	...	115
Visits and enquiries in relation to infectious diseases	...	...	...	...	...	...	4,444
Enquiries into deaths	...	...	...	...	...	...	193
Smoke observations (half-hour duration each)	...	...	...	...	...	...	33
Visits to tents, vans, and sheds	...	...	...	...	...	...	256
Inspections of back passages	...	...	...	...	...	...	23
Offensive trades...	...	...	...	...	...	...	317
Inspections under Rats and Mice Destruction Order	...	...	...	...	...	...	1,006

NOTICES SERVED FOR THE ABATEMENT OF NUISANCES—

Statutory	...	...	...	...	...	...	123
Preliminary	...	...	...	...	...	...	735
Verbal	...	...	...	...	...	...	113

HOUSE DRAINS TESTED—Total number of tests made ... 469

NEW HOUSES EXAMINED—

Drains	{	satisfactory	...	...	...	...	255
	{	unsatisfactory on first test	...	...	...	...	37
	{	rendered satisfactory after first test	...	...	...	...	13
W.C.'s	{	satisfactory	...	...	...	...	283
	{	of defective construction	...	...	...	...	20
Ash receptacles	{	satisfactory	...	...	...	...	185
	{	unsatisfactory	...	...	...	...	115
Site of house	{	satisfactory	...	...	...	...	284
	{	unsatisfactory	...	...	...	...	—

OTHER HOUSES (1st Test) satisfactory	...	...	...	11
Drains unsatisfactory	...	...	...	45
House drains re-tested during re-laying	...	...	...	76
HOUSES PASSED OFF AS SATISFACTORY AFTER DRAINAGE DEFECTS				
REPAIRED	...	...	...	32
NUMBER OF HOUSES WHERE SANITARY DEFECTS WERE FOUND				857
NUMBER OF HOUSES WHERE SANITARY DEFECTS WERE REMEDIED				624
NUMBER OF SANITARY DEFECTS REMEDIED	...	...	...	1060
DRAINS—				
Drains laid, re-laid, disconnected, and ventilated	...	...	...	27
Drains repaired and cleaned out	...	...	...	374
New Gullies fixed	...	...	...	1
W.C.'s—				
New w.c.'s fixed in lieu of privies, pail closets, and defective w.c.'s	...	...	...	11
Water closets repaired	...	...	...	138
Water closets unblocked	...	...	...	17
Fittings and water provided for w.c.'s	...	...	...	51
W.C. soil pipes repaired and ventilated	...	...	...	1
WASTE PIPES—				
Bath, lavatory, slopstone and rainwater pipes disconnected over gullies	...	...	...	—
New slopstone waste pipes fixed	...	...	...	37
New rainwater pipes fixed	...	...	...	11
Rainwater pipes and roof gutters repaired	...	...	...	51
Slopstone waste pipes repaired	...	...	...	11
MISCELLANEOUS—				
Houses cleansed and limewashed	...	...	...	15
Floors re-laid with flags	...	...	...	4
Floors re-laid with concrete	...	...	...	7
Back yards repaired	...	...	...	19
Back yards flagged or concreted	...	...	...	12
Back passages cleansed	...	...	...	7
Accumulations removed	...	...	...	151

MISCELLANEOUS—Contd.

Animals removed from improper situations	...	...	25
Roofs repaired	...	...	59
Gas Boiler provided	...	...	1
Yards cleansed	...	...	4
Watercourse cleansed	...	...	6
Overcrowding ceased	...	...	18
Manure Receptacles Abolished	...	...	1
„ „ Provided	...	...	1
Number of manholes, gullies, etc., reported to Cleansing Superintendent	...	...	37
Back streets requiring forming reported	...	...	15
Erections in yards, etc., reported	...	...	21

The above statement does not comprise a large number of visits paid in respect of portions of the work of the Department which are dealt with in this Report under special headings.

Factory and Workshops Act, 1901.—There are 291 Factories in the Borough, and through the courtesy of the Inspector of Factories I am able to give the following classification :—

Building and Furnishing Trades	...	...	39
Preparation of Food and Drink	...	...	97
Manufacture of Wearing Apparel	...	...	33
Printing and Bookbinding	...	...	15
Engineering	...	...	32
Lighting	...	...	12
Laundries and Cleaning Works	...	...	16
Miscellaneous	...	...	47
Total	...	...	<u>291</u>

There are 559 workshops in the Borough, and their classification is given in Table IV. on page 26.

During the year 83 workshops were discontinued, and 64 new workshops were added to the register. Of the 64 new workshops, 10 were Dressmakers, 5 tailors, 5 boots and clogs manufacturers or repairers, 10 joiners, 5 furniture making and 23 food preparing workshops. Twenty-six of the workshops included in the 1919 Report, have been converted into factories.

1.—INSPECTION OF FACTORIES, WORKSHOPS, AND WORKPLACES.

PREMISES.	Number of		
	Inspections	Written Notices	Prosecutions
FACTORIES (Including Factory Laundries)	175	6	1
WORKSHOPS (Including Workshop Laundries)	799	38	—
WORKPLACES (Other than Outworkers' Premises included in Part 3 of this Report)	— 290	— —	— —
TOTAL	1264	44	1

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, AND WORKPLACES.

PARTICULARS	Number of Defects					Number of Prosecutions.
	Not Reme- died 1919	Found	Remedied 1920	Not Reme- died 1920	Referred to H.M. Insp'r	
NUISANCES UNDER THE PUBLIC HEALTH ACTS :—						
Want of cleanliness	38	84	120	2	—	—
Want of ventilation	9	6	9	6	—	—
Overcrowding	2	1	1	2	—	—
Want of drainage of floors	—	—	—	—	—	—
Defective drains	2	20	22	—	—	1
Other nuisances	21	14	29	6	—	—
Sanitary { insufficient	7	4	3	8	—	—
Accom- { unsuitable or defective ..	8	4	3	9	1	—
modation { not separate for sexes ...	4	1	1	4	—	—
OFFENCES UNDER THE FACTORY AND WORKSHOP ACT :—						
Illegal occupation of underground bake- house (s. 101)	—	—	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ...	—	4	4	—	—	—
Other offences	—	—	—	—	—	—
(Excluding offences relating to out- work, which are included in Part 3 of this Report ...						
TOTAL	91	138	192	37	1	1

3.—HOME WORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.										OUTWORK IN UNWHOLESALE PREMISES SECTION 108			OUTWORK IN INFECTED PREMISES SECTIONS 109, 110										
	Lists received from Employers.						Prosecutions.				In-stances Notices served Prosecutions			In-stances Orders made (s. 110). Prosecutions (s'ctions 109, 110)										
	Twice in the year		Once in the year.				Failing to keep or permit inspection of lists		Failing to send lists															
	Outworkers		Lists		Outworkers		Occupiers as to keeping or sending lists		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(16)	
	Lists (2)	Con-tractors (3)	Workmen (4)	Con-tractors (5)	Workmen (6)	Workmen (7)																		
(1)							(8)																	
Wearing Apparel :—																								
Making, &c.	40	79	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas, &c.....	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	42	81	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Inspections of Outworkers' premises ...	46	Addresses of Outworkers received from other authorities ...	3
		do.	
		forwarded to other authorities ...	8

5.—OTHER MATTERS.

CLASS.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s, 133)	23
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector Reports (of action taken) sent to H.M. Inspector.
Other	11
Underground bakehouses (s. 101) :—	
Certificates granted during the year	—
In use at the end of the year	5

It will be observed from the preceding tables that 1264 visits were paid by the Inspectors during the year, and the sanitary conditions have been kept under close supervision. This total includes 290 visits to workplaces, but not the visits to slaughter-houses. 138 defects were detected, 91 were still requiring attention at the commencement of the year, and of these 192 were remedied, leaving 37 still requiring attention at the commencement of 1921. Circular letters were sent out at the beginning of February and August, asking for lists of outworkers. The premises of the outworkers were visited twice during the year, and were found in a satisfactory condition.

Offensive Trades.—The following exist in the Borough :—

Blood Drier at Public Slaughter-House	...	...	1
Tripe Boilers	„	„	2
Gut Scraper	„	„	1
Hide, Skin, and Fat Depots	„	„	2
Rag and Bone Depots	...	...	3
Fried Fish Shops	...	...	86

It is satisfactory to note that all the offensive trades, with the exception of Rag and Bone, and Fried Fish businesses, are at the abattoirs, where the effluvia emitted by them is not observed by any large body of people. They are also under daily observation by the Caretaker of the Abattoirs and the Meat Inspector.

It will be observed that I am able to give the number of Fried Fish Shops in the town. This business is now an “offensive trade,” and no new business may be established without the consent of the Sanitary Authority, under an Order, which came into operation on the 13th March, 1914. The number of fish friers premises on the register during 1920 was 87.

Common Lodging-Houses.—Under the Blackpool Improvement Act, 1901, sec. 47, the common lodging-houses, previously existing were re-registered. These houses, with their accommodation, are as follows :—

Eden Street : 160 adults and 1 child.

Seed Street : 56 adults and 1 child.

395 visits of inspection were paid, and it was found on the whole that the lodging-houses were kept in a cleanly condition, and managed satisfactorily.

Sands Inspections.—I have again to report a very satisfactory condition of the foreshore, and the improvement referred to in my previous reports has been well maintained. The screening apparatus at the north and south outfalls are in full working order, and have proved highly satisfactory in so far as the effects in cleansing the sands has been observed by Inspectors of my department. 115 inspections were made.

Basement Dwellings.—As regards numbers, these remain as formerly. They constitute one of the most unsatisfactory features in Blackpool, and it is highly desirable that the Corporation should have legal powers to prohibit, except by special registration, the use of basements as separate tenements. While some of the front basements in houses facing south might be considered suitable for the purpose, the back basements are very unsuitable, being badly lighted and ventilated. Constant supervision also is necessary to prevent overcrowding and other insanitary conditions arising from the action of the tenants, and 379 visits were paid by the Sanitary Inspectors.

Schools.—I do not hold the position of School Medical Officer, and a special report dealing with this part of the work of the Corporation is issued by the Education Committee.

The Sanitation of the schools is under my supervision. The premises are satisfactory and no structural alterations of a sanitary nature were carried out during the year. The questions of school closures, school exclusions for Infectious Diseases, and the disinfection of school premises, are dealt with in other portions of this report.

PROSECUTIONS IN 1920.

MONTHS.	ACT.	DETAILS OF OFFENCE.	RESULT.
May ...	Food and Drugs Acts, 1875-1899	Cream containing 0.5% Boric Acid	Fined £2 and costs £6 8s.
June ...	Public Health Act, 1875...	Defective drainage of workshop	Order for abatement of nuisance within 14 days. Costs 8s. 6d.
September	Food and Drugs Acts, 1875-1899	Milk adulterated with 12% added water	Fined £5 and costs £1 1s. 3d.

FOOD.

(a) **Milk Supply.**—The production and distribution of milk is entirely in private hands. I trust the time will come when the Municipality will organise and take under its own direction the milk supply. The milk supplied to the town has, on the whole, been good in quality, but there is still room for improvement in the cleanliness of the article.

The following is a list of the milksellers in the Borough :—

Dairies selling by retail	...	...	...	...	11
Provision dealers selling by retail	...	...	...	...	64
Butchers selling by retail	...	...	...	...	8
Persons meeting farmers' carts and delivering milk direct, not taking it home	...	...	...	...	17
Tea rooms and sweet shops selling in glasses as refreshments when asked for	...	...	...	...	81
Dining rooms selling milk in glasses when asked for	...	...	...	...	11
Selling sterilised milk	...	...	...	...	2
					194
No. of cowsheds in the Borough during 1920, the occupiers of which sold milk during the year...					42
Farmers outside the Borough bringing milk into the Borough	...	...	...	...	163
Ice cream dealers	...	...	...	...	148

During 1920, as seen on page 32, 94 visits were paid in all, to cowsheds within the Borough, 86 to milkshops and dairies, 358 to ice cream stalls and work-places, and 1 to restaurant kitchens.

Twenty-seven milk dealers, and five ice cream dealers, applied for registration during the year.

With regard to Tubercular Infection in milk, no samples were taken during the year for Bacteriological examination, but Messrs. Hutchinson and Walker have continued as in past years to examine all the cows in the Borough at least once each quarter. The following is a statement submitted by them upon the subject :—

“The cattle generally are in a much better condition than in the previous year. The average number of Bovine animals inspected each quarter is 1,164, rather less than last year. The average number of milk cows is 824.”

“Sixteen cases of Tuberculosis have been disposed of during the year, twelve cases of Generalised Tuberculosis, and four cases of Tuberculosis of the udder.”

“Four cases of Actinomycosis have been successfully treated, three cases of Cow Pox have been isolated and treated, and two cases of Chronic Mammitis have been slaughtered.”

It is hoped that the Tuberculosis Order, 1914, which was suspended during the war will soon be brought into operation.

Other Foods.—It is difficult to keep a register of all the shops and stalls selling food in Blackpool, and no census was taken in 1920. The inspection of food supplied has been carried out by the Meat and Food Inspector, and a very large amount of various articles of food have been destroyed as unsound during the year. In all cases our attention was called to the unsoundness by the vendor prior to offer for sale, and delay in transit has been the main cause. In 3 cases it was necessary to obtain Magistrates' Orders for destruction, relating to 18 Trays of Strawberries 4 Cheshire Cheese, and 9 dozen Rabbits.

Slaughter-Houses.—There exist in the Borough the Corporation Abattoirs and two private slaughter-houses.

The following animals were slaughtered at the abattoirs: (the corresponding numbers for the previous year being included for the purpose of comparison)—

					1919.	1920.
Cows	...	...	...	...	966	944
Heifers	...	...	...	...	1,944	2,092
Bullocks	...	...	...	...	1,700	1,644
Bulls	...	...	...	...	221	173
Calves	...	...	...	...	1,162	1,344
Sheep	...	...	...	...	14,463	40,126
Pigs	...	...	...	...	2,134	1,321
					22,590	47,644

The following were surrendered and destroyed from the Corporation Abattoir :—

(A) TUBERCULOSIS—

Beef (2,351 lbs.)
 1 Calf and Viscera (116 lbs.)
 28 Cows and 31 Viscera (11,910 lbs.)
 8 Heifers and 6 Viscera (3,053 lbs.)
 5 Pigs and Viscera (496 lbs.)

(c) UNFIT FOR FOOD—

Beef (374 lbs.)
 1 Bullock and Viscera (236 lbs.)
 15 Calves and 9 Viscera (688½ lbs.)
 12 Cows and Viscera (4,559 lbs.)
 3 Heifers and 1 Viscera (1,006 lbs.)
 12 Lambs (361 lbs.)
 3 Pigs and 2 Viscera (257 lbs.)
 3 Sheep and Viscera (120 lbs.)

PRIVATE SLAUGHTER-HOUSES.

	In 1914.	In January, 1920.	In December, 1920.
Registered ...	1	2*	2
● Licensed ...	—	—	—

* One registered Slaughterhouse exists in the area amalgamated to the Town since 1914.

The following visits in connection with the general Food Supply were paid during the year :—

Milkshops and dairies ...	...	...	...	...	86
Cowsheds in the Borough ...	...	...	...	...	94
Cowsheds out of the Borough ...	...	...	...	...	—
Ice cream stalls ...	...	...	...	...	69
Ice cream workshops ...	...	...	...	...	289
Public slaughter-houses ...	...	...	...	...	292
Other slaughter-houses in the Borough ...	...	...	...	...	114
Other slaughter-houses out of the Borough ...	...	...	...	...	17
Butchers' shops ...	...	...	...	...	710
Other shops ...	...	...	...	...	595
					2,266

In all cases where vendors of food have any doubt as to the quality of any article they are invited to send to the Health Office, when the Medical Officer of Health or Food Inspector will at once call and pass an opinion on the article. This arrangement continues to be largely taken advantage of.

It is very desirable that the Corporation should have powers to require the licensing or registration of all premises where human food is prepared, stored, or sold. The necessity also of clearing houses for meat brought in from outside districts has already been commented upon.

Sale of Food and Drugs Acts.—Mr. Sanderson, the Chief Sanitary Inspector is the Sampling Officer under these Acts. During the year 144 samples were taken, of which it will be observed, 19 were “informal.”

Informal Samples Number.		Nature of Sample.	Formal Samples Number.	
Taken.	Not Genuine		Taken.	Not Genuine
—	—	Butter	8	3
—	—	Coffee	7	—
—	—	Cream	9	2
—	—	Lard	7	—
1	—	Milk	77	14
—	—	Mustard	1	—
—	—	Pepper (white)	8	—
—	—	Potted Meat	1	1
—	—	Seidlitz Powders... ..	1	1
—	—	Sugar	4	1
—	—	„ (Brown)	1	1
2	1	Indian Brandy	1	1
1	—	Syrup Mori	—	—
1	—	„ Medicinal	—	—
1	—	„ Glycerophosph.	—	—
4	—	„ Hypophosph. Co.	—	—
1	—	„ Easton's	—	—
1	—	„ Glycerophosph. Form.	—	—
2	—	„ Ferri Phosph. Co.	—	—
1	—	„ Limonis	—	—
2	—	„ Glycerophosph. Co.	—	—
1	—	„ Ferri Iodidi.	—	—
1	—	„ Figs	—	—
19	1		125	24

With regard to the Formal Samples of milk returned as non-genuine, 5 were in respect of deficiency of cream, 6 in respect of dirt, and 3 in respect of added water. With regard to the deficiency in cream, the present state of the law places us in a very weak position, and it 's almost impossible to obtain a conviction if legal proceedings are taken. With regard to the "dirt," the vendors were all notified of the Analyst's reports and kept under observation. In one case in which the Analyst reported the addition of water, legal proceedings were instituted and the vendor was fined £5 and £1 1s. 3d. costs.

Milk and Cream Regulations.

	Number of Samples examined for the presence of a Preservative.	Number in which Preservative was reported to be present, and percentage of Preservative found in each sample.
Milk Cream	78 9	Nil. Complied with Regu- lations 8 Containing 0.5 per cent. Boric Acid... 1
Instances in which Samples have been submitted for Analysis to ascertain if the Statements on the label as to preservatives were correct :— I. Correct Statements made ... 8 II. Incorrect Statements ... 1 Percentage of Preservative found in each sample 8 of the Samples of Cream complied with the Regulations. 1 Sample contained 0.5 per cent. Boric Acid. Percentage stated on Statutory Label Determination made of Milk Fat in Cream sold as Preserved Cream :— I. Above 35 per cent. 9 II. Below 35 per cent. Nil. Total 9 Instances where (apart from Analysis) the requirements as to labelling or declaration of Preserved Cream in Article V. (1), and the Proviso in Article V. (2) of the Regulations have not been observed 1 Particulars of each case in which the Regulations have not been complied with, and action taken ... In the case of the sample containing 0.5 per cent. Boric Acid the Vendor was prosecuted and fined £2, and costs amounting to £6 6s. In the case of the Sample not properly labelled the Vendor submitted an explanation satisfactory to the Health Committee, and no further action was taken. Thickening substances. Any evidence of their addition to Cream or Preserved Cream. Action taken where found Nil.		

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.

Cases of Infectious Diseases notified during the years 1895-1920 (inclusive).

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Smallpox	8	—	—	—	—	—	4	2	22	8	3	9	—	—	—	—	—	—	—	—	—	3	—	—	—	1
Diphtheria and Membranous Croup	17	6	7	10	13	24	134	75	40	46	49	54	84	61	96	41	40	55	41	22	29	42	67	77	74	178
Erysipelas.....	—	—	—	—	—	14	13	13	19	26	17	18	13	18	38	20	26	23	24	22	29	19	12	20	22	38
Scarlet Fever	154	208	177	77	141	187	271	197	257	179	200	183	177	238	348	181	84	83	102	145	316	144	88	60	95	229
Typhus Fever	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever	79	66	50	67	59	68	58	70	42	28	51	39	41	65	48	12	39	17	13	32	35	6	7	10	6	1
Puerperal Fever.....	1	1	2	5	5	3	2	2	3	5	3	2	2	3	4	7	5	6	5	3	8	4	2	5	4	9
Measles.....	108	148	794	259	370	302	532	863	127	1386	871	389	309	1268	834	660	1181	720	1232	690	680	1049	1168	1409	369	1415
Rotheln.....	2	2	—	—	1	2	5	5	5	13	27	6	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis :																										
(a) Pulmonary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44	133	131	120	169	143	188	202	151	119
(b) Non-pulmonary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46	37	25	35	53	63	67	44
Cerebro-Spinal Meningitis.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	3	10	3	1	—
Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	1	1	—	1	1
Ophthalmia Neonatorum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17	11	18	14	21	28	37
Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Totals.....	369	431	1031	418	589	600	1019	1227	515	1691	1221	700	627	1653	1368	921	1419	1040	1594	1088	1303	1467	1610	1670	818	2073

Scarlet Fever.—229 cases, no deaths. This disease was prevalent during the year, especially in the last four months. The comparative incidence with previous years will be seen on the table on the preceding page. No particular portion of the town was affected. 203 of the cases (89%) were removed to the Sanatorium.

Diphtheria.—178 cases, 11 deaths. The majority of the cases occurred during the first four months of the year, and at the end of this period the incidence of the disease fell to below the normal. 147 of the cases, or 83%, were removed to the Sanatorium. No special part of the town was affected. The administrative measures taken to deal with this disease are as follow:—Free distribution of anti-toxin to actual and suspected cases, bacteriological examinations and daily supervision of all contacts, school exclusion, and isolation of patients at the Sanatorium.

Small Pox.—One case of this disease occurred, which was imported from Glasgow. The patient was immediately removed to the Elswick Hospital, 43 contacts vaccinated (of which four were primary vaccinations), and kept under daily observation. No extension of the disease occurred beyond the first notified case. Our Hospital accommodation for this disease is sufficient to meet all probable requirements.

Enteric Fever.—One case. This is the lowest incidence ever yet recorded. The nearest is an incidence of six in the year 1916. On reference to the table on the preceding page, it will be seen that during the earlier years there recorded—1895 to 1902—the notifications varied between 50 and 80. The disappearance of the disease is due to the improved sanitary surroundings, including a pure food and drink supply.

The notified case was removed to the Sanatorium. In cases where the patients are treated at home, or where suspected cases are known to be under observation, typhoid pails are sent, into which the excreta are placed. These pails are collected daily by us and their contents cremated.

Measles.—1,415 cases, four deaths. The incidence of this disease was the highest since the year 1895. The age incidence of the cases was as follows:—Under 5 years, 554; of school age, *i.e.*, 5 to 14, 819; and

over school age, 42. 98 cases were removed to the Sanatorium for isolation and treatment, and the infants' departments of eight schools were temporarily closed.

Measles remains a compulsorily notifiable disease in Blackpool.

Puerperal Fever.—Nine notifications, five deaths including one visitor. The details of the cases are as follows :—

Attended by medical practitioner only	...	2 cases
Attended by medical practitioner and midwife		7 cases

In the fatal cases death occurred 5, 6, and 12 days respectively after the onset.

Seven of the nine cases were removed to the Sanatorium for treatment, and in each case the necessary arrangements were made for the disinfection of the clothing, appliances, etc., of the midwife.

Infantile Paralysis. One case ; **Encephalitis Lethargica** one case ; and **Polio-Encephalitis** one case, were notified to me during the year, and 245 cases of **Chicken Pox** and 76 cases of **Whooping Cough** were reported to me, mainly by the School Attendance Officers.

Influenza.—Eleven deaths from this disease occurred during the year, including the death of one visitor. The months in which the deaths occurred were as follows :—

January ...	1	April ...	3	November	1
February	1	May ...	1		
March ...	2	July ...	2		

27 cases received Hospital treatment. The administrative measures for dealing with the disease were as follows :—(1) Isolation and treatment at the Sanatorium ; (2) provision of nursing and medical assistance to necessitous home cases ; and (3) the issuing of leaflets conveying instructions upon " precautionary methods."

Malaria.—12 notifications, no deaths. All the cases were carefully enquired into, and in each instance it was found that the infection was contracted abroad. There were no local cases of this disease.

Dysentery.—One notification, no deaths. This also was a military case with the infection contracted abroad. Full instructions have been given to the patient with a view to the prevention of spread, through infection of the food supply.

Pneumonia.—Although this disease is now compulsorily notifiable, only 69 cases were notified during the year, yet 77 deaths occurred. It is, therefore, obvious that a large number escaped notification. Until the disease ceases to be notifiable, the requisite notification by medical practitioners and others should be enforced. The administrative duties on the part of the Sanitary Authority are to provide, if necessary, medical and nursing services or hospital treatment.

Tuberculosis.—All forms of Tuberculosis have been compulsorily notifiable during the year. The following notifications divided into sexes and age groups, were received during the year :—

NUMBERS OF NOTIFICATIONS ON FORM A.													
Age Periods	Primary Notifications.											Total Notifications on Form A.	
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards		Total
Pulmonary : Males..... Females	—	—	—	—	4	12	20	22	8	3	—	69	80
Non-Pulmonary : Males..... Females	—	—	—	4	6	7	14	7	2	2	—	42	53
	—	5	3	2	2	1	—	1	—	—	—	14	20
	1	1	1	2	5	1	2	1	1	—	—	15	16
NUMBER OF NOTIFICATIONS ON FORM B.													
	Primary Notifications					Total Notifications on Form B.			NUMBER OF NOTIFI- CATIONS ON FORM C.				
	Under 5	5 to 10	10 to 15	Total		Poor Law Institutions.					Sanatoria.		
Pulmonary : Males..... Females	—	1	1	2	5	2	5	2	5	—	—	5	
Non-Pulmonary : Males..... Females	—	3	5	8	7	8	7	8	7	—	—	—	

Form A refers to cases notified by Medical Practitioners.

Form B refers to cases notified by School Medical Officer.

Form C refers to cases admitted to the Institution.

Except in cases where a desire to the contrary has been expressed all notified cases have been visited by the Tuberculosis Officer, or by the Tuberculosis Nurse. The following visits have been paid :—

		Pulmonary.	Non-Pulmonary	Total.
Primary Visits	...	138	54	192
Subsequent Visits	...	1,086	452	1,538
Total				1,730

Opportunities are taken on these visits to enquire into and advise upon the precautions adopted for reducing the risk of infection of other members of the household, to enquire into social conditions and the ability to obtain sufficient nourishment and medical attendance, to enquire into the health of other members of the household, and to arrange for the medical examination of contacts by the Tuberculosis Officer.

The Tuberculosis Dispensary, at the Public Health Office, has been open throughout the year, and the Tuberculosis Medical Officer and Nurse are in attendance. The Dispensary serves the following functions :— (1) examination of suspected cases for medical practitioners ; (2) examination of contacts ; (3) sorting of insured cases for recommendations for treatment ; and (4) treatment of patients. The total number of patients who attended the Dispensary was 246, and 2,718 attendances were made by them. The wards at the Infectious Diseases Hospital comprising 22 beds, approved by the Ministry of Health for the purpose, have been utilised throughout the year for the treatment of consumption. The patients are under the treatment of the Tuberculosis Officer and Medical Officer of Health. At the commencement of 1920, 15 cases were in hospital, and during the course of the year, 37 fresh cases were admitted. Of the 52 cases thus under treatment, 29 were discharged, 11 died, and 12 remained in at the end of the year. 5 patients were sent to the Meathop Sanatorium, 2 to Crossley Sanatorium, Frodsham, and 1 to the Shropshire Surgical Hospital.

Three movable wooden shelters are provided, which are erected as required at the premises of patients.

Periodical disinfection is offered and urged in all cases of Tuberculosis, especially when there is any change of room, but this is not taken advantage of to anything like the extent which is desirable.

The Corporation should consider the desirability of providing dental treatment for Tubercular patients.

61 deaths from this disease occurred during the year. The following table gives the notified and fatal cases divided into sex and age groups :—

Age periods.	Pulmonary Tuberculosis			
	Notifications.		Deaths.	
	Males	Females	Males	Females
Under 5 years	—	—	1	—
5 to 15 years	2	9	—	2
15 to 25 years	16	13	6	11
25 to 35 years	20	14	9	7
35 to 45 years	22	7	6	4
Over 45 years	12	3	9	6
Totals	72	46	31	30

The number of deaths and death-rates from Phthisis in the past twenty years have been as follows :—

Year.	Number of Deaths.	Death-rate for Residents.
1901	37	0.73
1902	45	0.86
1903	35	0.74
1904	47	0.86
1905	51	0.92
1906	39	0.68
1907	50	0.86
1908	47	0.86
1909	45	0.73
1910	38	0.63
1911	51	0.83
1912	49	0.79
1913	49	0.76
1914	71	1.07
1915	70	1.09
1916	67	1.06
1917	64	1.03
1918	87	1.34
1919	47	0.69
1920	61	0.86

The general scheme of dealing with Tuberculosis has remained as in former years, and the disappointing feature persists in that we do not get hold of the cases until the disease is advanced and when the prospect of cure is remote. The services of the Tuberculosis Officer might with much advantage be sought to a greater degree by medical practitioners and by the patients themselves.

Venereal Diseases.—The Clinic has remained in operation throughout the year. Dr. Bartlett, the Assistant Medical Officer of Health, has carried out the duties of Venereal Diseases Officer, and he submits the following report :—

“ During the past twenty-four months the number of cases attending the clinic for treatment has increased ten times. The town being so largely a health and pleasure resort with a fluctuating population, many cases are necessarily recorded as transfer cases without having completed their full course of treatment. It is necessary to impress upon them the importance of continuing with treatment, and the names of the various Venereal Diseases Centres in their towns, and hours of attendance are given to these cases.

“ The accommodation at present at the Victoria Hospital, both for in-patients and out-patients, is quite inadequate to cope with the numbers now attending. It is hoped, however, that within the next six months this will be remedied. The clinic being held in the Hospital buildings has its advantages in not making the cases conspicuous to others.

“ The addition of two evening clinics, one for females and the other for males, to meet the needs of patients who are unable to attend the ordinary morning clinics on account of their work, has proved itself a great success.

“ The hours of attendance are as follows :—

MALES—

Mondays—5-0 p.m. to 6-30 p.m.
 Wednesdays—11-0 a.m. to 12-30 p.m.
 Thursdays—11-0 a.m. to 12-30 p.m.
 Saturdays—11-0 a.m. to 12-30 p.m.

FEMALES—

Tuesdays—5-0 p.m. to 6-30 p.m.
 Fridays—11-0 a.m. to 12-30 p.m.

“The following Salvarsan Substitutes are kept at the Health Offices for distribution to Medical Practitioners who are qualified to receive them :—N.A.B., Galyl (intramuscular and intravenous) and Neo-Kharsivan.

“The treatment of Venereal Diseases in the majority of large towns is amply provided for, nevertheless, there is no diminution in the number of cases ; if anything it is increasing.

There seem to be only two courses open :—

1. Education of the public in prophylaxis.
2. Making Venereal Diseases notifiable.

There are arguments against each method :—

1. (a) Prophylactic treatment is of no use to women.
(b) Calomel ointment supplied may mask the symptoms of Syphilis until the disease has become generalised.
2. Compulsory notification may lead to concealment of the disease, and inefficient treatment by unauthorised persons.

“I think the advantages which would be gained in either or both instances would more than outweigh the disadvantages.

“The notices now in the Corporation Lavatories stating the days and hours of the clinics held at the Victoria Hospital have undoubtedly had a very beneficial effect. The advisability is now being considered of adopting measures having as their object the education of the public in prophylaxis.

“A full statistical report upon the work carried out during the year 1920 has been prepared and forwarded to the Ministry of Health, of which the following is a summary :—

	M.	F.
1. Number of patients under treatment		
1st January, 1920 	136	45
2. New out-patients 	433	86
3. Number of patients under treatment		
1st January, 1921 	238	77
4. Total attendances of out-patients ...	4,418	2,421
5. Aggregate number of in-patient days	91	182
6. Specimens examined for Wassermann		
reaction 		77

SCHOOL CLOSURE, 1920.

SCHOOL.	CAUSE.	CLOSED.	
		From.	To.
Ashburton Road School	Measles		
Devonshire Road School, Infants' Department	do.	Feb. 23	Mar. 13
Marton Infants' School	do.		
Revoe School, Infants' Department	do.		
Thames Road School Infants' Department	do.		
St. Kentigern's School, Infants' Department	do.	Mar. 5	Mar. 13
Talbot Road School, Infants' Department	do.	„ 24	„ 31
Victoria School, Infants' Department	do.	„ 29	„ 31

School Exclusions.—The following are the lines upon which we work with regard to the exclusion of infected children from school :—

SCARLET FEVER.

- 1.—PATIENTS : (a) Hospital Cases. Two weeks after discharge.
- (b) Home Cases. Two weeks after disinfection.
- 2.—CONTACTS : (a) Hospital Cases. Two weeks after removal to Hospital.
- (b) Home Cases. Two weeks after disinfection.

DIPHTHERIA.

- 1.—PATIENTS : (a) Hospital Cases. Four weeks after discharge.
- (b) Home Cases. Four weeks after disinfection.
- 2.—CONTACTS : (a) Hospital Cases. Two weeks after removal to Hospital.
- (b) Home Cases. Four weeks after disinfection.

ENTERIC FEVER AND ERYSIPELAS.

CONTACTS need not be excluded from School.

MEASLES.

1.—PATIENTS : Four weeks from onset.

2.—CONTACTS : (a) Infant Scholars. Three weeks from onset of last case.

(b) Other Scholars :—

I.—If had Measles. Not to be excluded.

II.—If not had Measles. Three weeks after onset of last case.

WHOOPIING COUGH.

PATIENTS : Six weeks, or as long as cough continues.

CONTACTS : (a) Infant Scholars. Same period as patient.

(b) Other Scholars :—

I.—If had Whooping Cough. Not to be excluded.

II.—If not had Whooping Cough. Same period as patient.

MUMPS.

PATIENTS : Three weeks.

CONTACTS : Not to be excluded.

CHICKEN POX.

PATIENTS : Three weeks, or until all scabs have disappeared.

CONTACTS : (a) Infant Scholars. Same period as patients.

(b) Other Scholars. Not to be excluded.

ENCEPHALITIS LETHARGICA.

CONTACTS : Three weeks after isolation of patient.

The above periods are liable to alteration in individual cases on instructions from the Medical Officer of Health.

Bacteriological Laboratory.—The following specimens were examined at the Public Health Office :—

Swabs for Diphtheria Bacilli	...	...	...	1,736
Sputum for Tubercle Bacilli	...	...	...	520
Blood for Widal Reaction	...	...	...	10
Smears for Gonococci	...	...	...	59
Urine for Tubercle Bacilli	...	...	...	4
Spinal Fluid for Meningococci, &c.	...	...	...	8
Miscellaneous	...	...	...	2
Total				2,339

I estimate that £550 has been saved to the Corporation by the examinations being carried out at the office instead of being sent to other Laboratories.

The Sanatorium.—The number of cases of various diseases treated at the Sanatorium during the year will be seen in the following table :—

				Remaining in at end of 1919.	Admitted during 1920.	Discharged during 1920.	Died during 1920.	Average stay of non-fatal cases.	Average stay of fatal cases.	Remaining in at end of 1920.
Scarlet Fever	...	...	M. F.	7 9	80 123	73 104	— 2	38 38	— 30	14 26
Diphtheria	...	...	M. F.	2 9	65 82	62 85	2 5	24 23	9 13	3 1
Enteric Fever	...	...	M. F.	— —	1 —	1 —	— —	74 —	— —	— —
Measles	...	...	M. F.	3 2	47 37	50 39	— —	13 12	— —	— —
Puerperal Fever		...	M. F.	— —	— 7	— 5	— 2	— 53	— 7	— —
Erysipelas	...	...	M. F.	— —	3 4	3 4	— —	13 13	— —	— —
Phthisis	...	...	M. F.	8 7	23 14	15 14	9 2	95 135	100 104	7 5
Other Diseases	...	...	M. F.	1 2	20 26	21 27	— —	17 13	— —	— 1
Totals	...	...		50	532	503	22	—	—	57

The total number of cases compares with previous years as follows :—

1920 — 532

1919 — 411

1918 — 537

1917 — 544

1916 — 596

1915 — 663

1914 — 297

1913 — 263

1912 — 217

1911 — 213

1910 — 303

1909 — 477

1908 — 402

1907 — 312

1906 — 306

1905 — 270

By keeping a daily record of all the inmates of the Hospital (patients and staff), I have been able to calculate accurately the cost of the maintenance per head per week. This includes feeding only (groceries, green-groceries, milk, fish, bread and meat), and works out at an average for the year of 12s. 9d. per head per week.

DISINFECTING DEPARTMENT.

Articles Removed from 625 Houses to Sanatorium for Disinfection :—

Sheets, quilts, blankets, &c.	4172
Articles of clothing	5923
Pillows and bolsters	2925
Beds	799
Mattresses	436
Carpets	538
Rugs and mats	192
Curtains	489
Cushions	233
Table cloths	75
Books	241
Miscellaneous articles	1467
Articles from Sanatorium	468
Total	17958

Infectious Diseases—

Inquiries into cases of infectious disease (see Visits and Inspections)	—
Houses disinfected after cases of infectious diseases ...	527
Houses disinfected after cases of consumption	53
Other premises disinfected	138
Isolation notices served upon householders... ..	2120
Isolation notices served upon School Managers	1319
Isolation notices served upon School Attendance Officers .	1319
Other notices to School Managers with regard to infectious diseases	1304
Other notices to householders with regard to infectious diseases	1304
Other notices to School Attendance Officers	1304
Notices to Free Library with regard to infectious diseases .	1736

MATERNITY AND CHILD WELFARE.

The work of this department is classified as follows :—(a) visitation to notified births and expectant mothers, (b) The Maternity and Child Welfare Clinic, (c) provision of midwives and doctors in necessitous cases, (d) Domiciliary Nursing of cases of Ophthalmia Neonatorum, (e) supervision of midwives, and (f) the establishment of a Maternity Home.

Notification of Births Acts.—During 1920 1,179 births were registered under the Registration Acts within the specified period of six weeks. Of these 1,158, or 98 per cent., were notified to me under the Notification of Births Act. The remaining 2 per cent. were not notified because of ignorance of the requirements of the Act.

The following two tables will reveal in a clear manner the particulars of the births :—

COMPARATIVE TABLE OF BIRTHS REGISTERED AND NOTIFIED.

	Registered under the Registration of Births Acts.	Registered Births Notified to the Medical Officer of Health under Notification of Births Act.
Doctor in attendance at Birth	406	405
Doctor and Midwife	374	373
Midwife.....	378	378
Other Persons	1	1
No Information	20	1
Totals.....	1179	1158

BIRTHS NOTIFIED TO THE MEDICAL OFFICER OF HEALTH.

Notified by	Notification of Births	Notification of Still Births
Doctor.....	254	24
Doctor & Midwife ...	112	8
Midwife.....	524	22
Others	206	2
Totals....	1096	56

The visits under this Act have been carried out by the Health Visitors under my supervision.

Advice has been given on the storage of food and on the feeding and clothing of infants, and a special point has been made of urging upon mothers the importance of persevering with the breast milk even if it has to be supplemented with cow's milk, suitably prepared. Suitable pamphlets and booklets embodying this advice have also been left at most of the houses.

Midwives Act, 1902.—

Total on Register, 1st January, 1920	...	...	23
No. who sent in Form VIII. of intention to practice	...	...	25
No. of new Midwives admitted to Roll during 1920	...	...	2
No. of Midwives who left the district during 1920...	...	...	2
No. of Midwives ceased to practise	...	...	1
No. of Midwives who died during 1920	...	...	—
Change of address reported to Central Midwives' Board	...	...	3
Notifications received from Midwives :—			
Sending for Medical help	...	...	39
Still-Births	...	...	30
Death of Child	...	...	—
Death of Mother	...	...	—
Visits paid by the Medical Officer of Health or Health Visitor	...	...	99

Of the 23 midwives on the roll on the 1st January, 1920, 8 are certified because they were in practice for one year prior to the passing of the Act ; 2 have the L.O.S. certificate ; 2 have the St. Mary's Hospital, Manchester, certificate ; and 11 the C.M.B. certificate.

7 cases of Puerperal Fever occurred in the practice of midwives during 1920. The midwives were temporarily suspended from practice until their bags, etc., were disinfected.

The Maternity and Child Welfare Clinic has been in operation on Monday and Thursday afternoons throughout the year, and Dr. Bartlett has been in medical attendance. Medical and nursing advice are given to mothers and expectant mothers, and Glaxo has been supplied in suitable cases. The statistical table at the end of this portion of the report will reveal a very large amount of work which has been done ; and in order to indicate the extent to which the work generally under our Maternity and Child Welfare Scheme is increasing, I have included the statistics for 1919 for the purpose of comparison. As far as the Clinic is concerned, it will soon be necessary to secure additional accommodation for this purpose, and also to increase the number of days upon which the Clinic is open.

The Maternity Home.—On the 4th February, 1920, the Maternity Home was opened. The original accommodation was for 8 patients, but as this was found to be insufficient, lodgings for the nurses were obtained in adjacent houses, and now up to 12 cases can be accommodated. Up to the end of the year 108 patients were admitted to the Home. 96 of these were delivered by the nursing staff, and 8 by the Medical Officers. 2 cases were undelivered, and the remaining 2 were only in the Home one day each, being subsequently delivered at the Home.

There is no definite allocation of beds for special cases. We deal mainly with (1) cases without suitable accommodation at their homes, and (2) cases where complications are feared or experienced. There is no differentiation made between legitimate or illegitimate cases. The charges for admission vary from 1 to 5 guineas per week.

Ophthalmia Neonatorum.—37 cases were notified to me during the year. Wherever possible the actual application of treatment to the eyes

is carried out by the Health Visitors, for which purpose visits were paid twice daily. Of the 37 cases, 33 recovered completely, 2 died, 1 left the town, and 1 is still under treatment. The remainder either left the town or died of some intercurrent disease.

Maternity and Child Welfare Statistical Report of work carried out.—

(a) Visits by Health Visitors—					1919.	1920.
Births—First visits	...	...	...	...	654	1,003
Subsequent visits	...	...	...	...	1,585	1,966
Expectant Mothers—First visits	...	...	...	...	186	183
Subsequent visits...	...	...	...	...	24	74
Still Births	...	...	...	...	25	35
Deaths	...	...	...	...	68	65
Puerperal Fever	...	...	...	...	4	10
Ophthalmia Neonatorum	...	...	...	...	434	388
Midwives	...	...	...	...	39	99
Female Outworkers	...	...	...	...	28	26
Children, other than newly born	...	...	...	...	45	86
Total					<u>3,092</u>	<u>3,935</u>
(b) Attendances at Clinic—					1919.	1920.
Expectant Mothers—First visits	...	...	...	...	35	10
Subsequent visits...	...	...	...	...	156	17
Children—First visits	...	...	...	...	245	386
Subsequent visits	...	...	...	...	3,409	3,948
Total					<u>3,845</u>	<u>4,361</u>
(c) Supply of " Glaxo " to Suitable Cases—					1919.	1920.
Supplied free	...	...	...	832 packets	391 packets	
At reduced charge	...	...	...	218 „	2,533 „	
At nett actual cost	...	...	...	3,199 „	5,982 „	
Total					<u>4,249</u> „	<u>8,906</u> „
(d) Provision of Midwives and Doctors—					1919.	1920.
Full Midwife's fee granted	...	...	...	...	38	33
Half Midwife's fee granted	...	...	...	...	69	41
Full Doctor's fee granted...	...	...	...	...	2	3
Half Doctor's fee granted	...	...	...	...	1	12

(In two instances the full Doctor's fee was refunded).

HOUSING.

I am indebted to the Borough Treasurer for supplying me with the number of inhabited and uninhabited houses during the Autumn enumeration, and for the sake of comparison I give the corresponding figures for the years since 1903.

The figures for 1920 were obtained by an enumeration held during January, 1921.

NUMBER OF HOUSES.

	Empty.	Inhabited.	Total.
1920	403	17,085	17,488
1919	144	16,848	16,992
1918	34	16,877	16,911
1917	27	16,016	16,043
1916	77	15,963	16,040
1915	105	15,682	15,787
1914	130	15,096	15,226
1913	121	14,784	14,905
1912	282	14,209	14,491
1911	298	13,714	14,012
1910	207	13,361	13,568
1909	200	12,994	13,194
1908	171	12,607	12,778
1907	153	12,334	12,487
1906	191	12,053	12,224
1905	188	11,789	11,977
1904	272	11,494	11,766
1903	309	11,181	11,490

The general housing conditions are good, Blackpool being mainly a modern town. There is a very marked shortage of houses owing to the increasing population and the curtailment of building by private enterprise. The shortage is being greatly met by the Municipal Housing Scheme, which provides for the erection of 664 houses in three separate estates viz., St. John's Estate, 246 ; Layton Estate, 164 ; and Watsons Lane Estate, 254. The shortage of houses has led to an unavoidable degree of overcrowding, but ill effects have been obviated as far as possible by frequent visitation and the enforcement of cleanliness and ventilation.

It has also been essential to allow a certain amount of laxity in the occupation of premises which, under normal conditions, would not be used for human habitation. As far as I am able to judge, this has not had any deleterious effect upon the health of the occupants or of the community generally.

The following are the requisite statistics upon the Housing question. As it was not appreciated that the return would be required in the actual form specified, the figures given are an approximation based upon the large amount of housing work carried out during the year. Arrangements have been made that in the report for the current year the figures will represent accurately the work carried out according to the subheadings given below.

1.—GENERAL.

(1) Estimated population	...	...	...	...	...	70,545
(2) General death-rate	...	...	...	...	...	13.60
(3) Death-rate from Tuberculosis	...	...	...	...	...	0.86
(4) Infantile Mortality	...	...	...	...	...	69.6
(5) Number of dwelling-houses of all classes	...	...	...	...	...	17,488
(6) Number of working-class dwelling-houses	...	...	...	...	...	
(7) Number of new working-class houses erected	...	...	...	...	...	

2.—UNFIT DWELLING-HOUSES.

I.—INSPECTION.

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts, and including the inspection of 292 new houses prior to occupation).	...	...	...	...	...	752
(2) Number of dwelling houses which were inspected and recorded under the housing (Inspection of District) Regulations, 1910.	...	...	...	...	...	185
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	...	...	...	—
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	...	...	...	...	...	320

II.—REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES.

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers	209
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III.—ACTION UNDER STATUTORY POWERS.

A. *Proceedings under section 28 of the Housing, Town Planning, &c., Act, 1919.*

- | | |
|--|--|
| (1) Number of dwelling-houses in respect of which notices were served requiring repairs | } Nil—dealt with under Public Health Acts. |
| (2) Number of dwelling-houses which were rendered fit— | |
| (a) by owners | |
| (b) by Local Authority in default of owners | |
| (3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close | |

B. *Proceedings under Public Health Acts.*

- | | |
|---|----|
| (1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied | 88 |
| (2) Number of dwelling-houses in which defects were remedied— | |
| (a) by owners | 81 |
| (b) by Local Authority in default of owners | — |

C. *Proceedings under sections 17 and 18 of the Housing, Town Planning, &c., Act, 1909.*

- | | |
|--|------|
| (1) Number of representations made with a view to the making of Closing Orders | Nil. |
| (2) Number of dwelling-houses in respect of which Closing Orders were made | Nil. |
| (3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit... .. | Nil. |

(4) Number of dwelling-houses in respect of which Demolition Orders were made	Nil.
(5) Number of dwelling-houses demolished in pur- suance of Demolition Orders	Nil.

3.—UNHEALTHY AREAS.

Areas represented to the Local Authority with a view to Improvement Schemes under (a), Part I., or (b) Part II., of the Act of 1890 :—

(1) Name of area	Nil.
(2) Acreage	Nil.
(3) Number of working-class houses in area ...	Nil.
(4) Number of working-class persons to be displaced.	

4.—Number of houses not complying with the building byelaws erected with consent of Local Authority under section 25 of the Housing, Town Planning, &c., Act, 1919

In December, 1920, the Town Clerk and I prepared and submitted a report upon the Housing and Town Planning Act, 1919, in its relationship to the work of the Health Department. As this report has not yet been finally considered, its publication will be deferred until the next Annual Report.

INSPECTION OF NEW HOUSES.—The procedure adopted with regard to new houses remains as in previous years, viz., the Borough Surveyor notifies me of the completion of the building. The houses are then examined by my department, and reports thereon made and sent to the Borough Surveyor. 292 new houses were examined during the year, and in all of them the sites were concreted. In 37 cases the drains were unsatisfactory on the first test, and it was necessary that some alteration should be made to them. In 20 cases the closets were of unsatisfactory construction, the defect in the majority of cases being an insufficient area of water in the closet pan. In the tabulated statement on page 20, it states that 115 new houses were without ash receptacles, but this is due to the fact that in these cases the landlords had delayed providing them until the tenants actually came into occupation.

METEOROLOGY.

The Blackpool observatory is 70 feet above mean sea level, and its geographical position is Lat. $53^{\circ} 49' N.$, and Long. $3^{\circ} 3' W.$

The pre-war publication of observations is now resumed, and daily telegrams are issued which secure insertion in the press.

The equipment of the observatory is as in former years, and the list of instruments is given in earlier reports.

SUNSHINE.—Bright sunshine amounted to 1,267.4 hours, or 299.7 hours below the average. The daily mean value was 3.46 hours, as compared with 4.19 in 1919. Sunshine was recorded on 296 days, and the sunniest days were May 24th, and June 4th, with 14.6 and 14.7 hours respectively. The brightest months were May and June, with 165.0 and 185.2 hours respectively.

RAIN.—The rainfall for the year was 36.81" or 3.66" above the average for the years 1904-1918. Rain fell on 222 days, and the months with the heaviest fall were March (4.37), April (4.37), May (4.29), and July (5.14). The heaviest fall of rain in one day was 0.85", on the 24th March.

GALES.—Thirteen gales occurred during the year, viz., on January 8th, 11th, 14th, 27th and 30th, February 1st, 10th, and 11th, March 12th, and 15th, May 3rd, November 15th, and December 3rd. In gusts the highest wind velocity was 70 miles per hour, on the 3rd of December.

SNOW fell on one day, viz., December 13th, and **HAIL** fell on nine days. **THUNDERSTORMS** occurred on 15 occasions, viz., January 11th, March 7th, April 13th, May 25th, 29th, June 12th, 13th, 16th, 17th and 18th, July 2nd, 8th and 26th, Oct. 2nd and 15th.

BAROMETRIC PRESSURE.—The highest observed reading was 1039.1 m.b., on the 5th February, and the lowest was 972.5 m.b., on the 11th January. The greatest Monthly range of pressure occurred in January (65.6 m.b.), and the smallest in June (23.7 m.b.)

TEMPERATURE.—The highest temperature recorded in the shade was $77^{\circ}F.$ on the 5th of May, and the lowest was $23^{\circ}F.$ on 13th December. The highest temperature recorded by the black bulb solar radiation thermometer was $126^{\circ}F.$ on the 16th of June, and the lowest temperature recorded on the grass was $16^{\circ}F.$ on the 6th of January.

MIST occurred on October 12th, November 22nd, December 8th and 10th.

FOG occurred on February 5th and December 9th.

HUMIDITY.—The mean relative humidity throughout the year was 86 per cent. of saturation. The lowest record was 78 per cent in the month of June, and the highest was 91 per cent in the month of February.

UNDERGROUND TEMPERATURE.—The highest temperature recorded at a depth of one foot was 62.0°F. on the 20th of July, and the lowest was 38.0°F. on the 7th of January. At a depth of four feet the highest record was 55.9°F. on August 21st and 22nd, and the lowest was 43.6°F. on January 13th.

WIND.—From daily observations made at 9 a.m., the following direction were recorded :—N. 18, N.E. 15, E. 45, S.E. 76, S. 38, S.W. 71, W. 47, N.W. 34, Calm 22,

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